Facility Name: **Renessenz, LLC**
City: Brunswick
County: Glynn
AIRS #: 04-13-12700006

Application #: TV-22650
Date Application Received: June 10 2014
Permit No: 2869-127-0006-V-05-0

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Introduction

This narrative is being provided to assist the reader in understanding the content of the attached draft Part 70 operating permit. Complex issues and unusual items are explained here in simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Georgia Air Quality Act, O.C.G.A § 12-9-1, et seq. and (2) Georgia Rules for Air Quality Control, Chapter 391-3-1, and (3) Title V of the Clean Air Act. Section 391-3-1-.03(10) of the Georgia Rules for Air Quality Control incorporates requirements of Part 70 of Title 40 of the Code of Federal Regulations promulgated pursuant to the Federal Clean Air Act. The primary purpose of this permit is to consolidate and identify existing state and federal air requirements applicable to **Renessenz, LLC** and to provide practical methods for determining compliance with these requirements. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. It initially describes the facility receiving the permit, the applicable requirements and their significance, and the methods for determining compliance with those applicable requirements. This narrative is intended as an adjunct for the reviewer and to provide information only. It has no legal standing. Any revisions made to the permit in response to comments received during the public participation and EPA review process will be described in an addendum to this narrative.

I. Facility Description

A. Facility Identification

1. Facility Name:

Renessenz, LLC

2. Parent/Holding Company Name

Renessenz, LLC

3. Previous and/or Other Name(s)

LyondellBasell Flavors & Fragrances, LLC

Millennium Specialty Chemicals, Inc.

Glidco, Inc.

SCM Glidco Organics, Inc.

SCM Corporation

4. Facility Location

209 SCM Road
Brunswick, Georgia 31523

5. Attainment, Non-attainment Area Location, or Contributing Area

Renessenz, LLC is located in Glynn County, which is designated by the Environmental Protection Agency (EPA) to be “attainment” or “unclassifiable” for all criteria pollutants.

B. Site Determination

There are no other facilities which could possibly be contiguous or adjacent and under common control.

C. Existing Permits

Table 1 below lists all current Title V permits, all amendments, 502(b)(10) changes, and off-permit changes, issued to the facility, based on a comparative review of form A.6, Current Permits, of the Title V application and the "Permit" file(s) on the facility found in the Air Branch office.

Table 1: List of Current Permits, Amendments, and Off-Permit Changes

Permit Number and/or Off-Permit Change	Date of Issuance/ Effectiveness	Purpose of Issuance
2869-127-0006-V-04-0	July 27, 2010	Administrative amendment to change name of facility due to ownership change.
2869-127-0006-V-04-1	February 4, 2011	Change in name from LyondellBasell Flavors & Fragrances, LLC to Renessenz LLC.

D. Process Description

1. SIC Codes(s)

2869

2. Description of Product(s)

The facility's primary products are Geraniol, Nerol, Linalool, Pinane Hydroperoxide, Para-Menthane, Dihydromyrcene, and Dihydromyrcenol, which are all used as flavorings and fragrances in the cosmetic industry.

3. Overall Facility Process Description

The facility produces flavorings and fragrances (for use in the manufacture of soaps, perfumes, hair sprays, etc.) from desulfurized α-pinene resin feedstock using several reactors and distillation units. The facility has several storage tanks to store the raw materials and finished products. Through a series of reduction and oxidation steps in a reactor, followed by a distillation step in a distillation unit to separate the reactants, products, and impurities, the facility produces various intermediates and products such as Geraniol, Nerol, Linalool, Pinane Hydroperoxide, para-Menthane, para-Menthane Hydroperoxide, Dihydromyrcene, and Dihydromyrcenol. The facility operates one 1981 oil, process derived fuel, and natural gas fired Nebraska boiler and one 1995 oil, process derived fuel, and natural gas fired Babcock and Wilcox boiler, each rated at a maximum heat input of 99 MMBtu/hr, to generate steam for production purposes. Additional fuel burning equipment includes three pyrolysis units and two flares.

4. Overall Process Flow Diagram

The facility provided a process flow diagram in their Title V permit application.

E. Regulatory Status

1. PSD/NSR

The facility is a "major" source under PSD/NSR regulations, but has twice taken emissions limits of 100 tons per year (ton/yr) of SO_2 on each of the two boilers in order to avoid PSD/NSR review. Renessenz, LLC is considered to belong in the Chemical

processing plants on EPA's list of 28 federally designated source categories for which the PSD major source threshold for all criteria pollutants is 100 tons per year.

2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

Pollutant	Is the Pollutant Emitted?	If emitted, what is the facility's Title V status for the pollutant?		
		Major Source Status	Major Source Requesting SM Status	Non-Major Source Status
PM	Yes	✓		
PM_{10}	Yes	✓		
$PM_{2.5}$	Yes	✓		
SO_2	Yes	✓		
VOC	Yes	✓		
NO_x	Yes	✓		
CO	Yes			✓
TRS	N/A			
H_2S	N/A			
Individual HAP	Yes			✓
Total HAPs	Yes			✓
Total GHGs	Yes	✓		

3. MACT Standards

The facility is a minor source with regards to the Title V major source threshold for hazardous air pollutants (HAPs) because the potential to emit a single HAP and a combination of HAPs is less than the threshold of 10 and 25 tons per year, respectively.

The two existing emergency generators and three emergency fire pumps are subject to 40 CFR 63, Subpart ZZZZ – "National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines." Renessenz has installed a new compression ignition engine at the wastewater treatment plant that is subject to 40 CFR 60, Subpart IIII and 40 CFR 63, Subpart ZZZZ, also.

The two existing boilers at the facility are subject to 40 CFR 63, Subpart JJJJJJ - "National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources."

Chemical manufacturing process units (CMPU), R501, R506, and TK501 and TK502, are subject to 40 CFR 63, Subpart VVVVVV – "National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources."

4. Program Applicability (AIRS Program Codes)

Program Code	Applicable (y/n)
Program Code 6 - PSD	n
Program Code 8 – Part 61 NESHAP	n
Program Code 9 - NSPS	y
Program Code M – Part 63 NESHAP	y
Program Code V – Title V	y

Regulatory Analysis

II. Facility Wide Requirements

A. Emission and Operating Caps:

None applicable.

B. Applicable Rules and Regulations

None applicable.

C. Compliance Status

The facility has not indicated any non-compliance.

D. Operational Flexibility

None applicable.

E. Permit Conditions

None.

III. Regulated Equipment Requirements

A. Brief Process Description

The facility produces flavor and fragrance chemicals from terpene chemicals.

B. Equipment List for the Process

Emission Units			Air Pollution Control Devices	
ID No.	**Description**	**Applicable Requirements/Standards**	**ID No.**	**Description**
U201	Nebraska Boiler	40 CFR 63, Subpart A 40 CFR 63, Subpart JJJJJJ 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	None	None
U202	Babcock & Wilcox Boiler	40 CFR 63, Subpart A 40 CFR 63, Subpart JJJJJJ 40 CFR 60, Subpart A 40 CFR 60 Subpart Dc 391-3-1-.02(2)(d) 391-3-1-.02(2)(g)	None	None
T301, T302, T304, T401, T402, T403, T602, T903, 1204, 1205	Distillation Units	40 CFR 60, Subpart A 40 CFR 60 Subpart NNN	None	None
T303, T601	Batch Distillation Units		None	None
TK501, TK502	Tanks	40 CFR 63, Subpart A 40 CFR 63, Subpart VVVVVV	None	None
R301, R302, R303, R306	Reactor Units	40 CFR 60, Subpart A 40 CFR 60 Subpart RRR	None	None
R501, R502, R503, R506	Batch Reactor Units	40 CFR 63, Subpart A (R501 and 506) 40 CFR 63 Subpart VVVVVV (R501 and R506)	None	None
H702	Pyrolysis Reactor Unit	40 CFR 60, Subpart A 40 CFR 60 Subpart RRR	FL01	Flare
H401	Pyrolysis Reactor Unit	40 CFR 60, Subpart A 40 CFR 60 Subpart RRR	FL02	Flare
WW01	Wastewater Treatment system		None	None
203, 204 and 205	Blended Residual Fuel Oil Tanks**	None	None	None
EG-01	Emergency Generator Engine	40 CFR 60, Subpart A 40 CFR 60, Subpart IIII	None	None

Emission Units			Air Pollution Control Devices	
ID No.	Description	Applicable Requirements/Standards	ID No.	Description
EG-02	Emergency Generator Engine	40 CFR 63, Subpart A 40 CFR 63, Subpart ZZZZ	None	None
EG-03	Emergency Generator Engine	40 CFR 63, Subpart A 40 CFR 63, Subpart ZZZZ	None	None
FP-01	Emergency Fire Pump Engine	40 CFR 63, Subpart A 40 CFR 63, Subpart ZZZZ	None	None
FP-02	Emergency Fire Pump Engine	40 CFR 63, Subpart A 40 CFR 63, Subpart ZZZZ	None	None
FP-03	Emergency Fire Pump Engine	40 CFR 63, Subpart A 40 CFR 63, Subpart ZZZZ	None	None

C. Equipment & Rule Applicability

Boilers (ID Nos. U201 and U202)

There are two boilers in this facility. The Nebraska boiler with identification number U201 was manufactured in 1981. It has a maximum heat input capacity of 99 million British thermal units per hour (MMBtu/hr) and fires natural gas, No. 2 fuel oil, No. 6 fuel oil, and/or blended oil.

The Babcock and Wilcox boiler with identification number U202 was manufactured in 1995. It has a maximum heat input capacity of 99 million British thermal units per hour (MMBtu/hr) and fires natural gas, No. 2 fuel oil, No. 6 fuel oil, and/or blended oil.

Each boiler is subject to the particulate matter limit outlined in Georgia Rule 391-3-1-.02(2)(d) "Fuel Burning Equipment". It is subject to paragraph 391-3-1-.02(2)(d)2(ii) because it was constructed after January 1, 1972. Georgia Rule 391-3-1-.02(2)(d)2.(ii) limits the emission of fly ash and/or other particulate matter from any fuel burning equipment based on the following:

For equipment equal to or greater than 10 million BTU heat input per hour, or equal to or less than 250 million BTU heat input per hour:

$P = 0.5(\frac{10}{R})^{0.5}$ Pounds per million BTU heat input;

Where:

P= the allowable weight of fly ash and/or other particulate matter in pounds per million BTU heat input

R= the heat input of fuel-burning equipment in million BTU per hour.

Each boiler is subject to Georgia Rule (g) "Sulfur dioxide". This rule limits fuel burning sources below 100 MMBtu/hr to sulfur content by weight of less than or equal to 2.5 percent. Although each boiler is allowed to burn fuel containing 2.5 percent sulfur, each burns fuel with sulfur

content well below 2.5 to avoid PSD. Compliance with Rule (g) is likely because processed natural gas and blended fuel oil contain sulfur much lower than the Rule (g) limit.

40 CFR 60, Subpart Dc – "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units."

Due to each size, the only NSPS that could be applicable is 40 CFR Part 60, Subpart Dc for "Small Industrial-Commercial-Institutional Steam Generating Units." Boiler U201 and U202 would be subject to Subpart Dc if they were constructed, modified, or reconstructed after June 9, 1989. Therefore, Boiler U202 is subject to Subpart Dc since it was constructed in 1995. However, the boiler is subject only to the opacity requirement in 40 CFR 60.43c(c), the fuel oil sulfur limit requirement in 40 CFR 60.42c(d), the fuel oil sulfur sampling requirement in 40 CFR 60.46c(d), the continuous opacity monitoring system (COMS) requirement for particulate matter in 40 CFR 60.47c(a), and the record keeping requirement in 40 CFR 60.48c(g)(2).

40 CFR 63, subpart JJJJJJ – "National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources."

Boilers U201 and U202 are subject to 40 CFR 63, Subpart JJJJJJ. Pursuant to 40 CFR 63.11194(b), each is an existing boiler because each was constructed before June 4, 2010. Pursuant to 40 CFR 63.11196(a)(1), each boiler is subject to the work practice or management practice standard of a tune-up no later than March 21, 2014. Pursuant to 40 CFR 63.11196(a)(3), each boiler is subject to the energy assessment requirement no later than March 21, 2014.

As indicated, each boiler fires natural gas, No. 2 fuel oil, No. 6 fuel oil, and/or blended oil. Pursuant to 40 CFR 63.11200, each boiler is classified as an oil-fired boiler vis-à-vis a gas-fired boiler. Pursuant to 40 CFR 63.11237, each is not a gas-fired boiler because the firing of liquid fuel is not limited to periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel not exceeding a combined total of 48 hours during any calendar year.

Pursuant to 40 CFR 63.11214(b), the Permittee is required to perform a performance tune-up of boilers U201 and U202 and submit a signed statement in the Notification of Compliance Status report that indicates that a performance tune-up was conducted.

Pursuant to 40 CFR 63.11214(c), the Permittee is required to submit a signed certification in the Notification of Compliance Status report that an energy assessment of Boilers U201 and U202 and their respective energy use systems was completed according to Table 2 of 40 CFR 63, Subpart JJJJJJ and is an accurate depiction of the facility.

Distillation Units (ID Nos. T301, T302, T304, T401, T402, T403, T602, T903, 1204, 1205)

40 CFR 60, Subpart NNN – "Standards of Performance for Volatile Organic Compound (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations."

Each distillation unit is subject to this New Source Performance Standard (NSPS) because each is a part of a process unit that produces any of the chemicals listed in 40 CFR 60.667 as a

product, co-product, by-product, or intermediate since the facility produces products, co-products, by-products, and intermediates that fall into the "C-11 or lower alcohols category in 40 CFR 60.667 and construction of each unit commenced after December 30, 1983. Each distillation unit with a vent stream flow rate less than 0.008 standard cubic meter per minute (scm/min) is exempt from this NSPS except for the performance test and procedure and recordkeeping requirements.

Note that Distillation Units T303 and T601 are batch units and categorically exempt in 40 CFR 60.660(c)(3).

Reactor Units (ID Nos. R301, R302, R303, R306) and Pyrolysis Reactor Units (ID Nos. H401 and H702)

40 CFR 60, Subpart RRR – "Standards of Performance for Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes."

Each reactor unit is subject to this New Source Performance Standard (NSPS) because each is a part of a process unit that produces any of the chemicals listed in 40 CFR 60.707 as a product, co-product, by-product, or intermediate since the facility produces products, co-products, by-products, and intermediates that fall into the "C-11 or lower alcohols category in 40 CFR 60.707 and construction of each unit commenced after June 29, 1990. Each reactor vessel with a vent stream flow rate less than 0.011 scm/min is exempt from this NSPS except for the performance test and procedure and recordkeeping requirements.

Note that Reactor Units R501, R502, and R503 R506 are batch units and categorically exempt in 40 CFR 60.700(c)(1).

Storage Tanks (ID Nos. TK501 and TK502) and Batch Reactor Units (ID Nos. R501 and R506)

40 CFR 63, Subpart VVVVVV – "National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources."

Storage Tanks TK501 and TK 502) and Batch Reactor Units (R501 and R506) are subject to this National Emission Standard for Hazardous Air Pollutant (NESHAP). The affected Chemical Manufacturing Process Unit (CMPU) includes all process vessels, storage tanks and other equipment that uses or produces any of the HAPS listed in Table 1 of 40 CFR 63, Subpart VVVVVV. The facility uses nickel as a catalyst in the manufacturing process at an individual concentration greater than 0.1 percent by weight. Tank TK502 is in target-HAP service because the nickel catalyst added contains 57.5 percent Nickel. The piping and equipment used to transfer the catalyst to Reactors R501 and R506 and then to Tank TK501 are in target-HAP service but only handle the material in solution.

The facility has estimated through engineering estimates that the Nickel emissions from the catalyst are less than 6 pounds per year. Therefore, the facility is not subject to the emission limits or other requirements in Table 4 of 40 CFR 63, Subpart VVVVVV because the emissions

of Nickel are less than 400 pounds per year. The storage tanks are not subject to Table 5 of 40 CFR 63, Subpart VVVVVV because the Nickel in solution does not form organic HAP.
The wastewater treatment system is not subject to Item 2, Table 6 of 40 CFR 63, Subpart VVVVVV because the wastewater stream does not contain partially soluble HAP concentration equal to or greater than 10,000 parts per million by weight.

Emergency Generator Engine (ID No. EG-01)

40 CFR 60, Subpart IIII – "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines."

Compression Ignition Engine EG-01 is subject to this NSPS. This engine which was installed in 2014 after the trigger date of July 11, 2005, has a brake horsepower of 173.5 and a displacement of less than 30 liters per cylinder.

Pursuant to the standard, "Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted."[1] Pursuant to 40 CFR 80.510(b), the owner or operator must meet the following limits:

Maximum Sulfur content by weight	Cetane Index OR Aromatic content	
	Minimum Cetane Index	Maximum Aromatic content by volume
15 ppm (0.0015 %)	40	35 %

Pursuant to the standard, "(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section:

(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

(2) Change only those emission-related settings that are permitted by the manufacturer; and

(3) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you."[2]

[1] 40 CFR 60.4207(b)
[2] 40 CFR 60.4211(a)

Emergency Generator Engines (ID Nos. EG-01, EG-02, and EG-03) and Emergency Fire Pump Engines (ID Nos. FP-01, FP-02, and FP-03)

40 CFR 60, Subpart ZZZZ – "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines."

Emergency Generator Engines EG-01, EG-02, and EG-03 and Emergency Fire Pump Engines FP-01, FP-02, and FP-03 are each subject to this NESHAP. Emergency Generator Engine EG-01 is "new" because it is located in an area source of HAP emissions and commenced construction or reconstruction after June 12, 2006.[3] Each Emergency Generator Engine EG-02 and EG-03 and each Emergency Fire Pump Engine FP-01, FP-02, and FP-03 is "existing" because each is located in an area source of HAP emissions and commenced construction or reconstruction before June 12, 2006.[4]

As indicated, Emergency Generator Engine EG-01 is subject to 40 CFR 60, Subpart IIII.

Pursuant to the standard, "An affected source that meets any of the criteria in paragraphs (c)(1) through (7) of this section must meet the requirements of this part by meeting the requirements of 40 CFR part 60 subpart IIII, for compression ignition engines or 40 CFR part 60 subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part.

(1) A new or reconstructed stationary RICE located at an area source."[5]

As indicated, since Emergency Generator Engine EG-01 is a new stationary source located at an area source of HAP emissions, the engine meets the requirements of 40 CFR 63, Subpart ZZZZ by meeting the requirements of 40 CFR 60, Subpart IIII.

Pursuant to the standard, each emergency generator engine EG-02, EG-03, FP-01, FP-02 and FP-03 "must comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013."[6]

Emergency generator engines EG-02, EG-03, FP-01, FP-02 and FP-03 must:[7]

a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[8]

b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and

c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

[3] 40 CFR 63.6590(a)(2)(iii)
[4] 40 CFR 63.6590(a)(1)(iii)
[5] 40 CFR 63.6590(c)
[6] 40 CFR 63.6595(a)(1)
[7] 40 CFR 63.6603(a); Item 4, Table 2d
[8] Sources have the option to utilize an oil analysis program as described in § 63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of 40 CFR 63, Subpart ZZZZ.

Pursuant to the standard, "If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed."[9]

D. Compliance Status

The facility has not indicated any non-compliance.

E. Operational Flexibility

None applicable.

F. Permit Conditions

Note that the phrase "Source code(s)" in previous permits has been replaced by the phrase "ID No(s)."

Permit Conditions 3.2.1 through 3.2.3 are existing conditions 3.2.1 through 3.2.3 in Permit 2869-127-0006-V-04-0.

Permit Conditions 3.2.1 and 3.2.2 limit the firing of any fuel in Boiler U201 or Boiler U202 such that the resulting emission of sulfur dioxide is less than 100 tons per year (ton/yr) from each boiler.

The Permittee has requested that Conditions 3.2.1 and 3.2.2 be combined to limit the firing of any fuel such that the resulting sulfur dioxide emissions from both boilers are less than 200 ton/yr. This permit has not acceded to this request because the Renessenz facility is classified as one of the 28 named categories (Chemical process plants) whose PSD major source threshold is 100 ton/yr. Each boiler was considered separately to determine whether the addition of the boiler was a major modification resulting in emissions that exceeded the PSD major source threshold of 100 ton/yr at that point in time in the permitting process.

Permit Condition 3.2.3 requires the Permittee to fire only liquid fuel from the blended oil tanks in Boilers U201 and U202.

New Condition 3.3.1 requires the Permittee to comply with all applicable provisions of 40 CFR 63 - National Emission Standards for Hazardous Air Pollutants Subpart A-General Provisions.

New Condition 3.3.2 requires the Permittee to comply with all applicable provisions of 40 CFR 63, Subpart JJJJJJ - National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources. This ensures that the Permittee knows that the affected source is subject to all applicable provisions of 40 CFR 63, Subpart JJJJJJ, even if a requirement has been unintentionally omitted from the permit.

[9] 40 CFR 63.6625(f)

New Condition 3.3.3 requires the Permittee to comply with all applicable provisions of 40 CFR 63, Subpart VVVVVV - National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources. This ensures that the Permittee knows that the affected source is subject to all applicable provisions of 40 CFR 63, Subpart VVVVVV, even if a requirement has been unintentionally omitted from the permit.

New Condition 3.3.4 requires the Permittee to comply with all applicable provisions of 40 CFR 63, Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines. This ensures that the Permittee knows that the affected source is subject to all applicable provisions of 40 CFR 63, Subpart ZZZZ, even if a requirement has been unintentionally omitted from the permit.

New Condition 3.3.5 stipulates that Emergency Generator Engine (ID No. EG-01) is subject to the New Source Performance Standards (NSPS) Subpart A - "General Provisions" as indicated in Table 8 to Subpart IIII of Part 60 – Applicability of General Provisions to Subpart IIII and Subpart IIII - "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines." This ensures that the Permittee complies with all applicable provisions of 40 CFR 60, Subpart A and 40 CFR 60, Subpart IIII including parts that may have been unintentionally omitted from the permit.

Condition 3.3.6 stipulates that the Babcock & Wilcox Boiler (ID No. U202) is subject to the New Source Performance Standards (NSPS) Subpart A - "General Provisions" and Subpart Dc - "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units." This ensures that the Permittee complies with all applicable provisions of 40 CFR 60, Subpart A and 40 CFR 60, Subpart Dc including parts that may have been unintentionally omitted from the permit. This is existing Condition 3.3.1 of Permit 2869-127-0006-V-04-0 with different wording.

Condition 3.3.7 limits the opacity of the flue gas discharged from Boiler U202 to 20 percent or less. This is existing Condition 3.3.2 of Permit 2869-127-0006-V-04-0.

Condition 3.3.8 limits the sulfur content of the fuel oil fired in Boiler U202 to under 0.5 percent or less by weight. This is existing Condition 3.3.3 of Permit 2869-127-0006-V-04-0.

Pursuant to 40 CFR 63.11205(a), new Condition 3.3.9 requires the Permittee to maintain the boilers in a manner consistent with safety and good air pollution control practices for minimizing emissions.

Condition 3.3.10 stipulates that the Distillation Units (ID Nos. T301, T302, T304, T401, T402, T403, T602, T903 1204, and 1205) are subject to the New Source Performance Standards (NSPS) Subpart A - "General Provisions" and Subpart NNN - "Standards of Performance of Volatile Organic Compound Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations." This ensures that the Permittee complies with all applicable provisions of 40 CFR 60, Subpart A and 40 CFR 60, Subpart NNN including parts that may have been unintentionally omitted from the permit. This is existing Condition 3.3.4 of Permit 2869-127-0006-V-04-0 with different wording.

Pursuant to 40 CFR 60.660(c)(6), Condition 3.3.11, requires the Permittee to maintain the vent stream flow rate of each distillation unit to less than 0.008 standard cubic meter per minute (scm/min) or 0.3 standard cubic foot per minute (scf/min). This is existing Condition 3.3.5 of Permit 2869-127-0006-V-04-0 with slightly different wording.

Note that the adoption of this vent stream flow rate exempts distillation units from all provisions of 40 CFR 60, Subpart NNN except for the test method and procedure, and the record keeping and reporting requirements.

Note that Condition 3.3.6 of Permit 2869-127-0006-V-04-0 has been deleted because pursuant to 40 CFR 60.660(c)(3), batch distillation units are categorically exempt from 40 CFR 60, Subpart NNN.

Condition 3.3.12 stipulates that the Reactor Units (ID Nos. R301, R302, R303, R306) and the Pyrolysis Reactor Units (ID Nos. H702 and H401) are subject to the New Source Performance Standards (NSPS) Subpart A - "General Provisions" and Subpart RRR – "Standards of Performance for Volatile Organic Compound Emissions from Synthetic organic Chemical Manufacturing Industry (SOCMI) Reactor Processes. This ensures that the Permittee complies with all applicable provisions of 40 CFR 60, Subpart A and 40 CFR 60, Subpart RRR including parts that may have been unintentionally omitted from the permit. This is existing Condition 3.3.7 of Permit 2869-127-0006-V-04-0 with different wording.

Pursuant to 40 CFR 60.700(c)(4), Condition 3.3.13, requires the Permittee to maintain the vent stream flow rate of each reactor unit to less than 0.011 standard cubic meter per minute (scm/min) or 0.39 standard cubic foot per minute (scf/min). This is existing Condition 3.3.8 of Permit 2869-127-0006-V-04-0.

Note that the adoption of this vent stream flow rate exempts reactor units from all provisions of 40 CFR 60, Subpart NNN except for the test method and procedure, and the record keeping and reporting requirements.

Pursuant to 40 CFR 60.702(b), Conditions 3.3.14 and 3.3.15 require the Permittee to combust the vent stream flue gas from the pyrolysis reactor units (ID Nos. H702 and H401) in an air-assisted flare that meets the applicable requirements of 40 CFR 60.18 because each vent stream flow rate is higher than 0.011 scm/min. This is existing Conditions 3.3.9 and 3.310 of Permit 2869-127-0006-V-04-0.

[Note that flares are being used to combust the vent stream flue gas from Pyrolysis Reactor Units H702 and H401 because each pyrolysis reactor unit is an affected facility pursuant to 40 CFR 60.700(b) that operate with a vent stream flow rate exceeding or equal to of 0.011 scm/min. Each unit is required to comply with one of three standards in 40 CFR 60.702 which includes the requirement to combust emissions in a flare.]

Pursuant to 40 CFR 60.18(c)(1), Condition 3.3.16 requires the flares to operate with no visible emissions as determined by Method 22 of Appendix A to 40 CFR 60. This is existing Condition 3.3.12 of Permit 2869-127-0006-V-04-0.

Pursuant to 40 CFR 60.18(c)(2), Condition 3.3.17 requires the flares to operate with a flame present at all times. This is existing Condition 3.3.13 of Permit 2869-127-0006-V-04-0.

Pursuant to 40 CFR 60.18(c)(5), Condition 3.3.18 requires the flares to be designed and operated with an exit gas velocity less than the maximum velocity (V_{max}). This is existing Condition 3.314 of Permit 2869-127-0006-V-04-0.

Pursuant to 40 CFR 60.18(e), Condition 3.3.19 requires the flares to be operated at all times that emissions are vented to the flares. This is existing Condition 3.3.15 of Permit 2869-127-0006-V-04-0.

Pursuant to 40 CFR 60.18(c)(3)(ii), Condition 3.3.20 requires the flares to have a net heating value of the gas being combusted equal to or greater than the values indicated. This is existing Condition 3.3.16 of Permit 2869-127-0006-V-04-0.

Pursuant to 40 CFR 63.11494(f), new Condition 3.3.21 requires the Permittee to maintain compliance for Tanks 501 and 502 and Reactor Vessels 501 and 506.

Pursuant to 40 CFR 63.11495(a)(3), new Condition 3.3.22 requires Tanks 501 and 502 and Reactor Vessels 501 and 506 to conduct inspections to determine that the tanks and vessels are free of leaks by following the procedure indicated.

Pursuant to 40 CFR 63.11495(a)(4), new Condition 3.3.23 requires the Permittee to repair any leak in Tanks 501 and 502 and Reactor Vessels 501 and 506 within 15 calendar days after detection of the leak.

Pursuant to 40 CFR 63.11495(a)(5), new Condition 3.3.24 requires the Permittee to keep records of the dates and results of each inspection, equipment repairs, and reasons for any delays in equipment repair.

Pursuant to 40 CFR 63.11495(d), new Condition 3.3.25 requires the Permittee to maintain the CMPU's (Tanks 501 and 502 and Reactor Vessels 501 and 506) in a manner consistent with safety and good air pollution control practices for minimizing emissions.

Pursuant to 40 CFR 63.11496(f)(1), new Condition 3.3.26 requires the Permittee to determine the sum of metal HAP emissions from Tanks 501 and 502 and Reactor Vessels 501 and 502. The Permittee is not required to determine the metal HAP emissions if total metal HAP usage is less than 400 pounds per year.

Pursuant to 40 CFR 63.11496(f)(2), new Condition 3.3.27 requires the Permittee to keep records of the number of batches operated per month for batch vents, or the process operating hours for continuous vents if the Permittee's estimate of total uncontrolled metal HAP emissions are less than 400 pounds per year (lb/yr).

Pursuant to 40 CFR 60.4202(a)(2), new Condition 3.3.28 requires Emergency Generator Engine EG-01 to not discharge into the atmosphere any emissions in excess of that indicated.

Pursuant to 40 CFR 60.4206, new Condition 3.3.29 requires Emergency Generator Engine EG-01 to meet the emission limits of Condition 3.3.28 over the entire life of the engine.

Pursuant to 40 CFR 60.4207(b) and 40 CFR 80.510(b); new Condition No. 3.3.30 requires the Permittee to use, for Emergency Generator Engine EG-01, ultra-low sulfur diesel oil that meets a maximum sulfur content, by weight of no greater than 15 parts per million, a minimum Cetane Index of 40, and a maximum Aromatic content by volume of 35 percent.

Pursuant to 40 CFR 60.4211(a), new Condition 3.3.31 requires the Permittee to comply with the emission standards specified in 40 CFR 60, Subpart IIII for Emergency Generator Engine EG-01 and other specifications therein.

Pursuant to 40 CFR 4211(g)(2), new Condition 3.3.32 requires the Permittee to demonstrate compliance for Emergency Generator Engine EG-01 as indicated in the condition if the Permittee does not install, configure, operate, and maintain the engine according to the manufacturer's instructions.

Pursuant to 40 CFR 63.6603(a) - Item 4, Table 2d, new Condition 3.3.33 requires the Permittee, for the indicated engines, to change oil and filter every 500 hours of operation or annually, inspect air cleaner every 1,000 hours or annually, inspect all hoses and belts every 500 hours of operation or annually. Each of these requirements is to be completed within 500 hours of operation or annually, whichever comes first.

Pursuant to 40 CFR 63.6625(e)(3), new Condition 3.3.34 requires the Permittee to maintain and operate the indicated engines according to the manufacturer's written instructions or develop a maintenance plan for the engines in a manner consistent with good air pollution control practices for minimizing emissions.

Pursuant to 40 CFR 63.6625(h), new Condition 3.3.35 requires the Permittee to minimize the engines time spent at idle during startup and minimize the engines startup time for a period needed for appropriate and safe loading, not to exceed 30 minutes.

Pursuant to 40 CFR 63.6625(i), new Condition 3.3.36 requires that the indicated engines may use an oil analysis program to extend the oil change requirement.

Pursuant to 40 CFR 63.6640(a), new Condition 3.3.37 requires the Permittee to demonstrate continuous compliance for the indicated engines.

Conditions 3.4.1 through 3.4.3 are the same as Conditions 3.4.1 through 3.4.3 of Permit 2869-127-0006-V-04-0 with changes in some wording. These conditions limit visible emissions and fuel sulfur content from Boiler U201, and particulate matter emissions from Boiler U201 and Boiler U202.

[Note that because Boiler U202 is subject to 40 CFR 60, Subpart Dc, the limits for visible emissions and fuel oil sulfur content are found in Part 3.3 of the permit.]

Condition 3.5.1 is the same as Condition 3.5.1 of Permit 2869-127-0006-V-04-0. This condition requires the implementation and maintenance of a program for detection and correction of leaks from process units.

Note that Condition 3.5.2 has been deleted since Pyrolysis Reactor Unit H701 is no longer in service.

IV. Testing Requirements (with Associated Record Keeping and Reporting)

A. General Testing Requirements

The permit includes a requirement that the Permittee conduct performance testing on any specified emission unit when directed by the Division. Additionally, a written notification of any performance test(s) is required 30 days (or sixty (60) days for tests required by 40 CFR Part 63) prior to the date of the test(s) and a test plan is required to be submitted with the test notification. Test methods and procedures for determining compliance with applicable emission limitations are listed and test results are required to be submitted to the Division within 60 days of completion of the testing.

B. Specific Testing Requirements

Conditions 4.2.1 through 4.2.5 are the same as Conditions 4.2.1 through 4.2.5 of Permit 2869-127-0006-V-04-0 with some changes. These conditions require that new vent stream flow rates be established should the existing vent stream flow rates increase due to equipment or process changes. The reason for these conditions is that though the distillation and reactor units are affected units per 40 CFR 60, Subpart NNN and 40 CFR 60, Subpart RRR, these units have been exempt from some standards of these NSPS because the facility has opted to reduce the vent stream flow rates below the thresholds of 0.08 scm/min for distillation units and 0.011 scm/min for reactor units.

V. Monitoring Requirements

A. General Monitoring Requirements

Condition 5.1.1 requires that all continuous monitoring systems required by the Division be operated continuously except during monitoring system breakdowns and repairs. Monitoring system response during quality assurance activities is required to be measured and recorded. Maintenance or repair is required to be conducted in an expeditious manner.

B. Specific Monitoring Requirements

Conditions 5.2.1 through 5.2.6 are the same as 5.2.1 through 5.2.6 of Permit 2869-127-0006-V-04-0 with some changes in wording.

Pursuant to 40 CFR 60.47(a), Condition 5.2.1 requires the installation, calibration, maintenance, and operation of a continuous opacity monitoring system (COMS) for Boiler U202 while firing oil.

Condition 5.2.2 requires the installation, calibration, maintenance, and operation of systems to continuously monitor and record the parameters indicated therein.

Condition 5.2.3 requires a trained observer to daily monitor the visible emissions from Boiler U201 while firing oil.

Condition 5.2.4 requires the Permittee to daily sample blended fuel oil using the automatic fuel sampling equipment system on the fuel line that feed Boiler U201 and Boiler U202 and conduct an analysis to determine the fuel oil sulfur content of the sample.

Pursuant to 40 CFR 63.11223(a), Condition 5.2.5 requires the Permittee to perform a performance tune-up of Boilers U201 and U202 and keep records to demonstrate continuous compliance.

Pursuant to 40 CFR 63.11223(b), Condition 5.2.6 requires the Permittee to conduct biennial tune-up of Boiler U201 and Boiler U202 following the procedure indicated therein.

Pursuant to 40 CFR 63.6625(f), Condition 5.2.7 requires the Permittee to install a non-resettable hour meter on the engines indicated, if one is not already installed.

VI. Record Keeping and Reporting Requirements

A. General Record Keeping and Reporting Requirements

The Permit contains general requirements for the maintenance of all records for a period of five years following the date of entry and requires the prompt reporting of all information related to deviations from the applicable requirements. Records, including identification of any excess emissions, exceedances, or excursions from the applicable monitoring triggers, the cause of such occurrence, and the corrective action taken, are required to be kept by the Permittee and reporting is required on a [quarterly or semiannual] basis.

Template Conditions 6.1.3 and 6.1.4 were updated in September 2011 to allow ~60 days to submit periodic reports. Alternative reporting deadlines are allowed per 40 CFR 70.6, 40 CFR 60.19(f) and 40 CFR 63.10(a).

B. Specific Record Keeping and Reporting Requirements

Pursuant to 40 CFR 60.43c(c), existing Condition 6.1.7a.i defines as excess emission any visible emissions from Boiler U202 equal to 20 percent or less when firing oil.

Existing Condition 6.1.7b.i defines as an exceedance any sulfur dioxide emissions from Boiler U201 or Boiler U202 equal to or exceeding 100 tons per year. This was to prevent each modification from being classified as a major modification as defined in the new source review rules.

Existing Condition 6.1.7b.ii defines as an exceedance any fuel oil sulfur content of fuel oil burned in Boiler U201 and Boiler U202 exceeding 2.5 percent sulfur by weight.

Pursuant to 40 CFR 60.42c(d), existing Condition 6.1.7b.iii defines as an exceedance any oil sulfur content of fuel oil burned in Boiler U202 exceeding 0.5 percent sulfur by weight.

Pursuant to 40 CFR 63.6640(b), new Condition 6.1.7b.iv defines as an exceedance any non-compliance with any requirement in Condition 3.3.36 for the indicated engines.

Existing Condition 6.1.7c.i defines as an excursion any determination made in accordance with Condition 5.2.3 in which visible emissions from Boiler U201 exceed 20 percent.

Existing Condition 6.2.1 requires the Permittee to maintain records of the occurrence and duration of any startup, shutdown, and malfunction in the operation of an affected facility.

Existing Condition 6.2.2 requires the Permittee to submit reports semiannually for Boiler U201 and Boiler U202 in accordance with the requirements of the condition.

Pursuant to 40 CFR 63.11225(b), new Condition 6.2.3 requires the Permittee to submit to the Director, upon request, an annual certification report in accordance with the requirements in the condition.

Pursuant to 40 CFR 63.11225(c), new Condition 6.2.4 requires the Permittee to maintain the records indicated in the condition.

Pursuant to 40 CFR 63.11225(d), new Condition 6.2.5 requires the Permittee's records be in a form suitable and readily available for expeditious review. Records are required to be kept for five years following the date of each recorded action.

Pursuant to 40 CFR 60.665(i), existing Condition 6.2.6 requires the Permittee to maintain up-to-date readily accessible records to indicate that the vent stream flow rates from the distillation units is less than 0.008 scm/min. This is Condition 6.2.3 of Permit 2869-127-0006-V-04-0.

Pursuant to 40 CFR 63.665(l)(5), existing Condition 6.2.7 requires the Permittee to submit a report of any change in equipment or process specification that increases the operating vent stream flow rate above the exemption flow rate of 0.008 scm/min for the distillation units. This is Condition 6.2.4 of Permit 2869-127-0006-V-04-0 with some changes.

Pursuant to 40 CFR 63.705(a), existing Condition 6.2.8 requires the Permittee to notify the Division within 90 days before implementing a change in the standards stipulated in 40 CFR 60.702 and upon implementing the change to conduct a performance test of the Pyrolysis Reactor Unit affected. This is Condition 6.2.5 of Permit 2869-127-0006-V-04-0.

Pursuant to 40 CFR 60.705(b), existing Condition 6.2.9 requires the Permittee to keep up-to-date readily accessible records to indicate that the vent stream flow rates from the reactor units and Decant Tank D306 is less than 0.011 scm/min. This is Condition 6.2.6 of Permit 2869-127-0006-V-04-0.

Pursuant to 40 CFR 63.705(l)(4), existing Condition 6.2.10 requires the Permittee to submit a report of any change in equipment or process specification that increases the operating vent stream flow rate above the exemption flow rate of 0.011 scm/min for the reactor unit and the Decant Tank D306. This is Condition 6.2.7 of Permit 2869-127-0006-V-04-0 with some changes.

Pursuant to 40 CFR 60.665(f) and 40 CFR 60.705(e), existing Condition 6.2.11 requires the Permittee to maintain up-to-date, readily accessible records of all periods of operation for which the pilot flame of each flare is absent. This is Condition 6.2.8 of Permit 2869-127-0006-V-04-0.

Pursuant to 40 CFR 60.662(b) and 40 CFR 60.702(b), existing Condition 6.2.12 requires the Permittee to maintain on file a schematic diagram of the affected vent stream, collecting systems, fuel systems, control devices, and bypass systems as part of the initial report. This is Condition 6.2.9 of Permit 2869-127-0006-V-04-0.

Pursuant to 40 CFR 60.665(l) and 40 CFR 60.705(l), existing Condition 6.2.13 requires the Permittee to submit semiannual reports of the indicated information for each flare. This is Condition 6.2.10 of Permit 2869-127-0006-V-04-0.

Pursuant to 40 CFR 63.11501(c), new Condition 6.2.14 requires the Permittee to maintain files for Tanks 501 and 502 and Reactor Vessels 501 and 506 for at least five years following the date

of each occurrence. The Permittee must comply with the record keeping and reporting requirements indicated in the condition.

Pursuant to 40 CFR 63.11501(d), new Condition 6.2.15 requires the Permittee to submit semiannual compliance reports of the information specified in the condition for Tanks 501 and 502 and Reactor Vessels 501 and 506.

Pursuant to 40 CFR 63.6640(f), new Condition No. 6.2.16 requires the Permittee to determine and record the indicated information using the non-resettable hour meter for the engines.

VII. Specific Requirements

A. Operational Flexibility: None applicable.

B. Alternative Requirements: None applicable.

C. Insignificant Activities

Refer to http://airpermit.dnr.state.ga.us/GATV/default.asp for the Online Title V Application.

Refer to the following forms in the Title V permit application:

- Form D.1 (Insignificant Activities Checklist)
- Form D.2 (Generic Emissions Groups)
- Form D.3 (Generic Fuel Burning Equipment)
- Form D.6 (Insignificant Activities Based on Emission Levels of the Title V permit application)

D. Temporary Sources: None.

E. Short-Term Activities: None.

F. Compliance Schedule/Progress Reports: None

G. Emissions Trading: None.

H. Acid Rain Requirements: None.

I. Stratospheric Ozone Protection Requirements

The standard permit condition pursuant to 40 CFR 82 Subpart F has been included in the Title V permit. The facility operates equipment that is subject to Title VI of the 1990 Clean Air Act Amendments.

J. Pollution Prevention: None.

K. Specific Conditions: None.

VIII. General Provisions

Generic provisions have been included in this permit to address the requirements in 40 CFR Part 70 that apply to all Title V sources, and the requirements in Chapter 391-3-1 of the Georgia Rules for Air Quality Control that apply to all stationary sources of air pollution.

Template Condition 8.14.1 was updated in September 2011 to change the default submittal deadline for Annual Compliance Certifications to February 28.

Template Condition Section 8.27 was updated in August 2014 to include more detailed, clear requirements for emergency generator engines currently exempt from SIP permitting and considered insignificant sources in the Title V permit.

Template Condition Section 8.28 was updated in August 2014 to more clearly define the applicability of the Boiler MACT or GACT for major or minor sources of HAP.